SRD 8000

4x DVB-S/S2 SD/HD Decoder

TABLE OF CONTENTS

1. SAFETY INSTRUCTION 4
2. Overview 5
3. Technical Specification 6
3.1. Input Port 7
3.2. Output Port 7
4. Equipment composition 8
4.1. FRONT PANEL DISPLAY AND KEY BUTTON 8
4.2. REAR PANEL 8
5. Installation Guide 9
5.1. Installation Preparation 9
5.2. Environment Requirement 9
5.3. Grounding Requirement 9
5.4. Rack Grounding 10
5.5. Equipment Grounding 10
6. BASIC PROGRAMMING GUIDE 11
6.1. Lock Status Display 11
6.2. Press “EXIT” to Enter Menu 11
6.3. Input Setting 11
6.3.1. TUNER 1 11
6.3.1.1. Oscillator Freq. 12
6.3.1.2. Downlink Freq. 12
6.3.1.3. Symbol Rate 12
6.3.1.4. Polarization 12
6.3.1.5. 22KHz 13
6.3.1.6. DiSEqC 13
6.4. Decoder Setting 13
6.4.1. CH1 13
6.4.1.1. Playing Program 14
6.4.1.2. Video Setting 14
6.4.1.3. Audio Setting 15
6.5. Network Setting 17
6.5.1. IP Address 17
6.5.2. Subnet Mask 17
6.5.3. Gateway 17
6.5.4. NMS UDP Port 17
6.5.5. MAC Address 18

6.6. Save Config 18
6.7. Load Config 18
6.7.1. Reload Config 18
6.7.2. Restore Config 18
6.8. Version 19
6.9. Language 19
6.10. Error Info 19
7. Error Info and Shooting 20
7.1. Indicator Status 20
7.2. Error Shooting 20
7.2.1. “POWER” is off 20
7.2.2. “ALARM” Indicator Turns Red 20
8. NMS Operation Guide 21
8.1. NMS Login 21
8.2. Add Frequency 23
8.3. Add Device 23
8.4. Edit Device 24
8.5. Check and Set Config 27
8.5.1. Signal Monitor 27
8.5.2. Program Setting 28
8.6. Public Function of NMS 29

SAFETY INSTRUCTION

- Read manual carefully before use
- Do not open the case without disconnecting it from the mains
- Allows the air circulation around the equipment
- Protects against the water or liquids drops on the equipment
- Do not place near to the heat sources or hot areas.
- It is required a room with good ventilation.
- Do not obstruct he ventilation slots.

1. Overview

SRD 8000 4x SD/HD satellite decoder has 4×DVB-S/S2 RF input interfaces and supports MPEG4 AVC/H.264 and MPEG2 video decoding and MPEG-1, AAC audio decoding. The input satellite signal will be demodulated into TS stream and output a program by HDMI or AV interface. It provides powerful signal receiving and decoding, which meets a variety of application requirements. It's one of the main digital head-end equipments for receiving satellite programs.

- Support DVB-S/S2 input
- Support HDMI and AV output
- Support H.264/MPEG4 AVC and MPEG-2 video and MPEG-1 and AAC audio decoding
- Support PAL/NTSC AV format
- Real-time monitoring of input and output signal
- LCD/Keyboard control by front panel and network management by Ethernet

2. Technical Specification

Input	**RF**	DVB-S/S2 (950-2150MHz), F connector with Loop
Output	**HDMI**	4×HDMI 1.3
	CVBS	4× RCA connector
	Audio	4 pairs of unbalanced audio RCA stereo interface
Video Decoding	**Decode Mode**	SD: MPEG-2 SD 4:2:0 MP@ML
		SD: MPEG-4 AVC SD MP@L4
		HD: MPEG-4 AVC HD MP@L5.0/HP@5.0
	Video Format	PAL/ NTSC
	Resolution	1080×50/60i/p; 720×576; 720×480
Audio Decoding	**Decode Mode**	MPEG-1 layer2/MP3
		Dolby Digital (AC-3); Dolby Digital Plus (E-AC-3)
		MPEG-4 AAC /AAC Plus (HE-AAC v1/2)
General Features	**Size**	482mm×410mm×44mm
	Temperature Range	0~45°C (Operation); -20~80°C (Storage)
	Power	100-240VAC, 50Hz, 25W

2.1. Input Port

2.1.1. RF IN

Input interface: 4×DVB-S/S2, F-head

Connector: F-head with loop F output

Impedance: 75Ω

Input frequency: 950 MHz~2150 MHz

Symbol Rate: 2Msps~45Msps

TS package format: 188/204bytes (automatic identification)

2.2. Output Port

2.2.1. HDMI

Connector: 4×HDMI

2.2.2. CVBS

Connector: 4X RCA

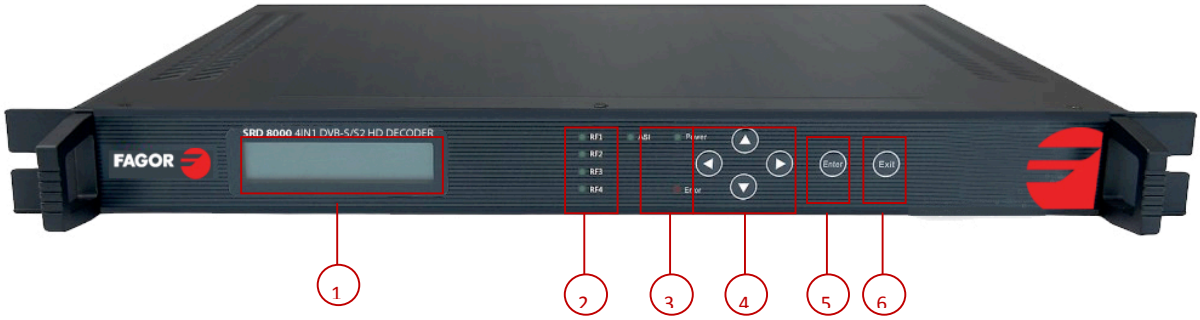
2.2.3. Network Interface

Ethernet Port: IEEE802.3 Ethernet, RJ45

Software Protocol: IP/UDP

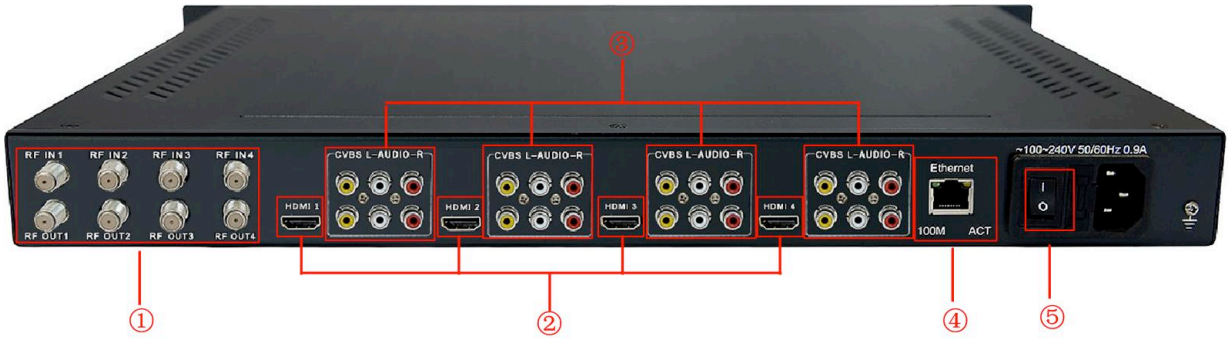
3. Equipment composition

3.1. FRONT PANEL DISPLAY AND KEY BUTTON



1	LCD Display
2	RF Indicator
3	Indicator
4	Keyboard
5	Enter
6	Exit

3.2. REAR PANEL



1	RF IN and RF LOOP OUT
2	HDMI out
3	AV out
4	Ethernet Port
5	Power Switch

4. Installation Guide

4.1. Installation Preparation

- Check possible lose or damage of the device during transportation and read the complete user manual.
- Prepare a suitable environment for installation.
- Install the device.
- Connect the Signal cables.

4.2. Environment Requirement

- It is recommended to take into account the following point related with the installation environment:
- When installing multi-row of racks, please make the distance 1.2~1.5M between front door and back door, and the distance 0.8M between rack and wall.
- The floor of the room where is installed the device should be non-conducting, dust free. Anti-static material volume resistivity: 1x107 ÷ 1x1010 Ω, ground current-limiting resistance: 1MΩ, floor bearing weight: > 450Kg/m2.
- Working temperature: for long term operation: 5 ÷ 40º C, for short term operation: 0 ÷ 45º.
- Relative humidity: for long term operation: 20% ÷80 %, for short term operation: 10% ÷ 90%.

4.3. Grounding Requirement

Good ground wire design is the base of the whole system, and is essential to lightning protection and anti-interference. The system must follow above principles:

- Keep good electrical contact between both ends of outer conductor and shielding layer and the appearance of metal case of the connected device.
- Make sure that connections of both ends of the ground wire are with good electrical contact and prepare for corrosion prevention treatment.
- Do not use other device for ground wire electrical connection.
- The sectional area of ground wire from rack connecting to anti-thunder unit must be greater than or equal to 25mm2

4.4. Rack Grounding

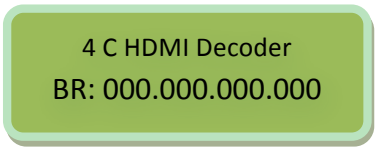
Ground terminals of racks in one room should be separately connected to protective are copper bar provided by side board. And ground wire should be as far as possible short. If the wire is too long when installing, please cut off to avoid ground wire coiling. The sectional area of guide line of ground terminal row must be greater than or equal to 25mm2.

4.5. Equipment Grounding

When grounding, use guide line to connect protective area binding post to the protective ground wire row of assembly rack.

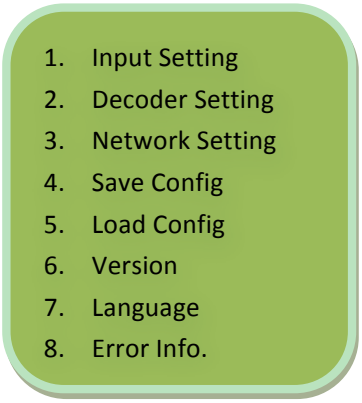
5. BASIC PROGRAMMING GUIDE

5.1. Lock Status Display



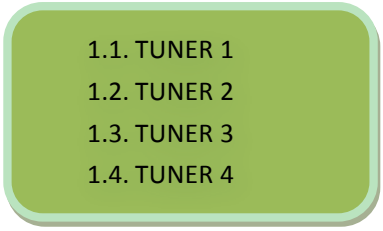
5.2. Press “EXIT” to Enter Menu

After initialization, the menu shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



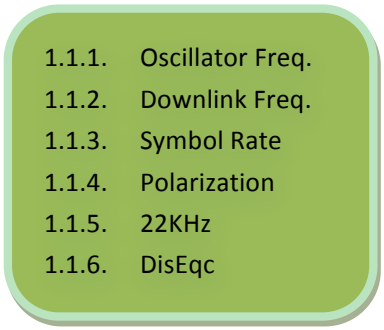
5.3. Input Setting

Move the cursor to “input Setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



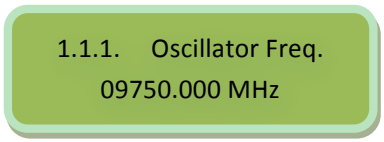
5.3.1. TUNER 1

Move the cursor to “TUNER 1” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



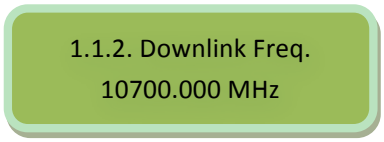
5.3.1.1. Oscillator Freq.

Move the cursor to “oscillator freq.” and enter the LNB frequency:



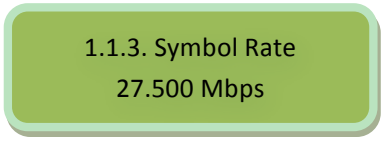
5.3.1.2. Downlink Freq.

Move the cursor to “downlink freq.” and enter satellite transponder frequency:



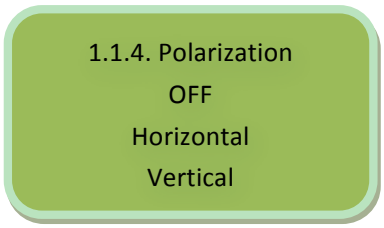
5.3.1.3. Symbol Rate

Move the cursor to “symbol rate” and enter the satellite transponder symbol rate:



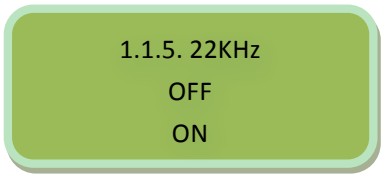
5.3.1.4. Polarization

Move the cursor to “polarization” and select between OFF, Horizontal-18V and Vertical-13V:



5.3.1.5. 22KHz

Move the cursor to “22KHz” and select OFF or ON for Low or High Band:



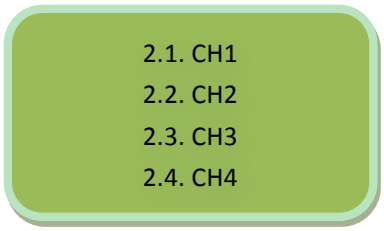
5.3.1.6. DiSEqC

Move the cursor to “DiSEqC.” and select between A, B, C or D LNB:

- **Tuner 2 to tuner 4 is same as tuner 1.**

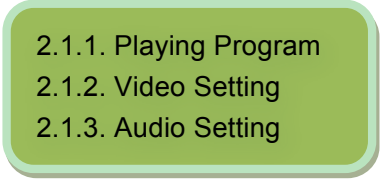
5.4. Decoder Setting

Move the cursor to “decoder setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



5.4.1. CH1

Move the cursor to “CH1” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



5.4.1.1. Playing Program

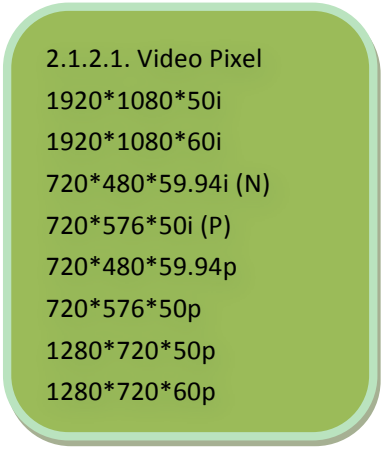
Move the cursor to “playing program” and enter into it. Then it shows as below:

5.4.1.2. Video Setting

Move the cursor to “video setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):

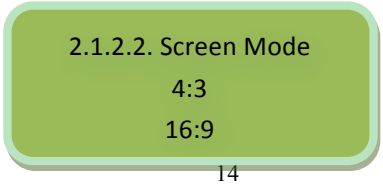
5.4.1.2.1. Video Pixel

Move the cursor to “video pixel” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



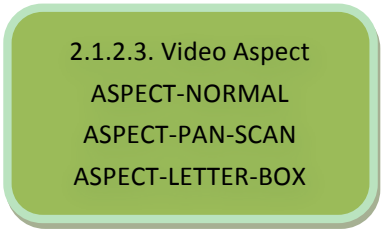
5.4.1.2.2. Screen Mode

Move the cursor to “screen mode” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



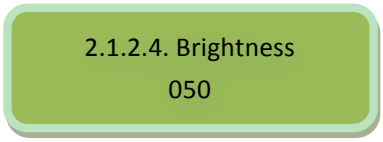
5.4.1.2.3. Video Aspect

Move the cursor to “video aspect” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



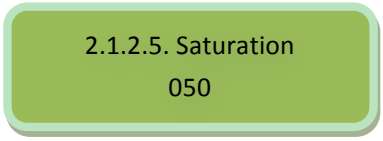
5.4.1.2.4. Brightness

Move the cursor to “brightness” and enter into it. Then it shows as below:



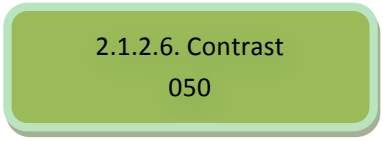
5.4.1.2.5. Saturation

Move the cursor to “saturation” and enter into it. Then it shows as below:



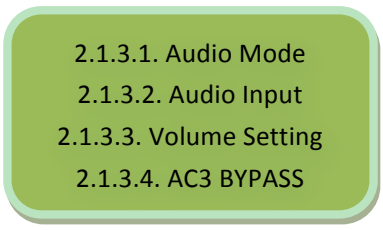
5.4.1.2.6. Contrast

Move the cursor to “contrast” and enter into it. Then it shows as below:



5.4.1.3. Audio Setting

Move the cursor to “audio setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):

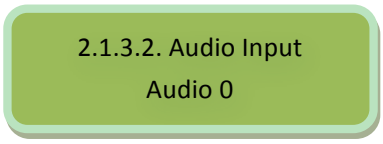


5.4.1.3.1. Audio Mode

Move the cursor to “audio mode” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):

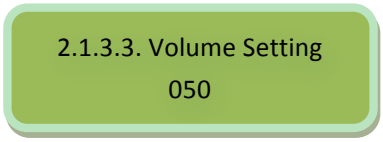
5.4.1.3.2. Audio Input

Move the cursor to “audio input” and enter into it. Then it shows as below:



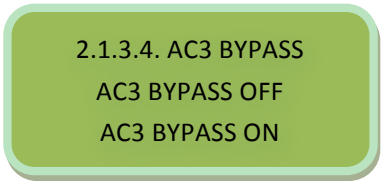
5.4.1.3.3. Volume Setting

Move the cursor to “volume setting” and enter into it. Then it shows as below:



5.4.1.3.4. AC3 BYPASS

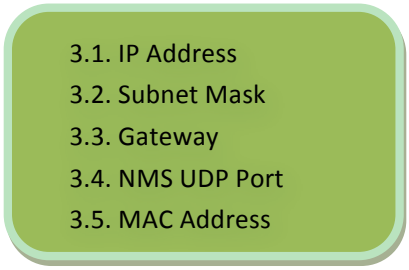
Move the cursor to “ac3 bypass” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



- **CH2 to CH4 is same as CH1.**

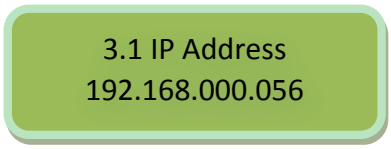
5.5. Network Setting

Move the cursor to “network setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



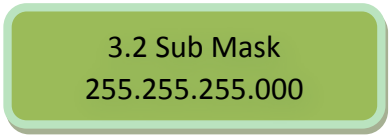
5.5.1. IP Address

Move the cursor to “IP address” and enter into it. Then it shows as below:



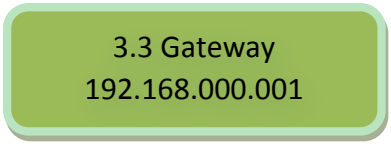
5.5.2. Subnet Mask

Move the cursor to “subnet mask” and enter into it. Then it shows as below:



5.5.3. Gateway

Move the cursor to “gateway” and enter into it. Then it shows as below:

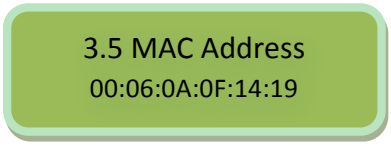


5.5.4. NMS UDP Port

Move the cursor to “NMS UDP port” and enter into it. Then it shows as below:

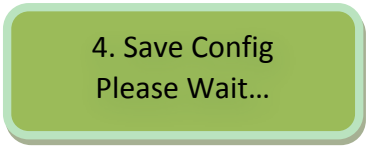
5.5.5. MAC Address

Move the cursor to “MAC address” and enter into it. Then it shows as below:



5.6. Save Config

Move the cursor to “save config” and enter into it. Then it shows as below:

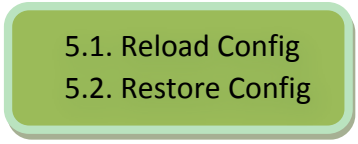


Power Failure Saving:

When power failure, it can automatically save last status and start again when power on.

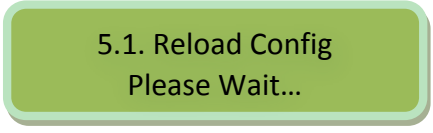
5.7. Load Config

Move the cursor to “load config” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



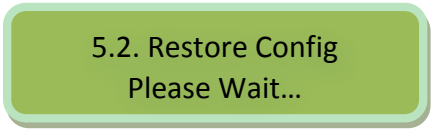
5.7.1. Reload Config

Move the cursor to “reload config” and enter into it. Then it shows as below:



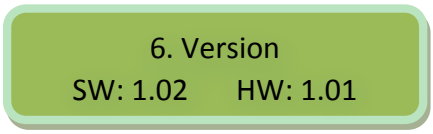
5.7.2. Restore Config

Move the cursor to “restore config” and enter into it. Then it shows as below:



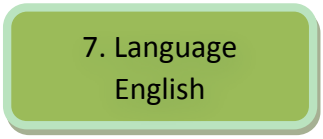
5.8. Version

Move the cursor to “version” and enter into it. Then it shows as below:



5.9. Language

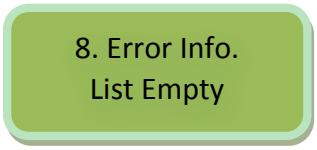
Move the cursor to “language” and enter into it. Then it shows as below:



The system works normally after all above settings.

5.10. Error Info

Move the cursor to “error info.” and enter into it. It shows as below:



6. Error Info and Shooting

6.1. Indicator Status

There are 2 LED indicators on the panel:

1. “POWER” is power indicator. When switch on, it’s green, which indicates device works well.
2. “ERROR” indicates error status when it’s red.
3. “LOCK1, 2, 3, 4” means each input channels status

6.2. Error Shooting

6.2.1. “POWER” is off

Please check power supply, power cable and power plug.

6.2.2. “ALARM” Indicator Turns Red

Device works abnormally. Please check error info and process accordingly.

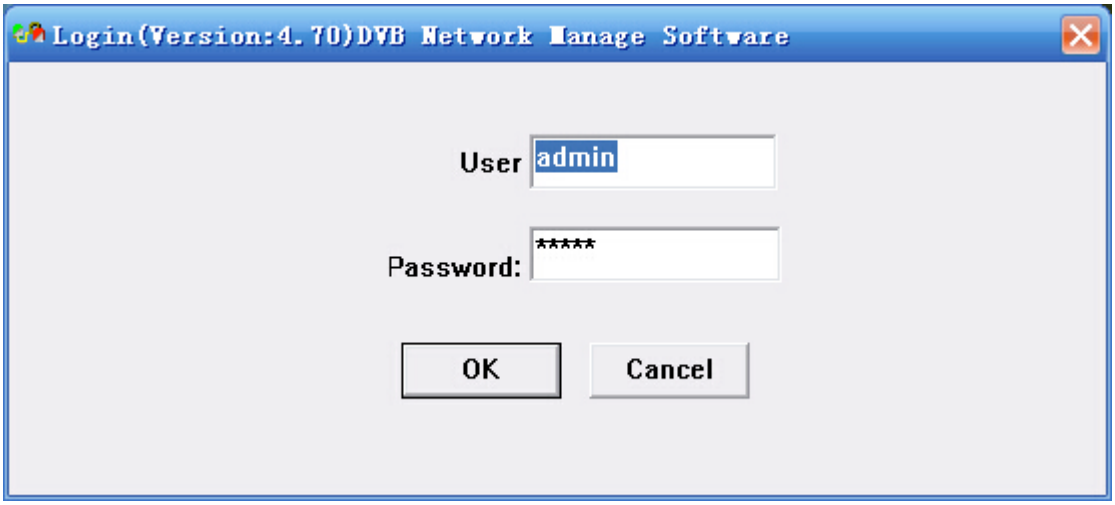
7. NMS Operation Guide

Network Management System (NMS) can remotely set config and monitor the device. It can be used only after being authorized.

Except setting config by front panel, you can also use NMS

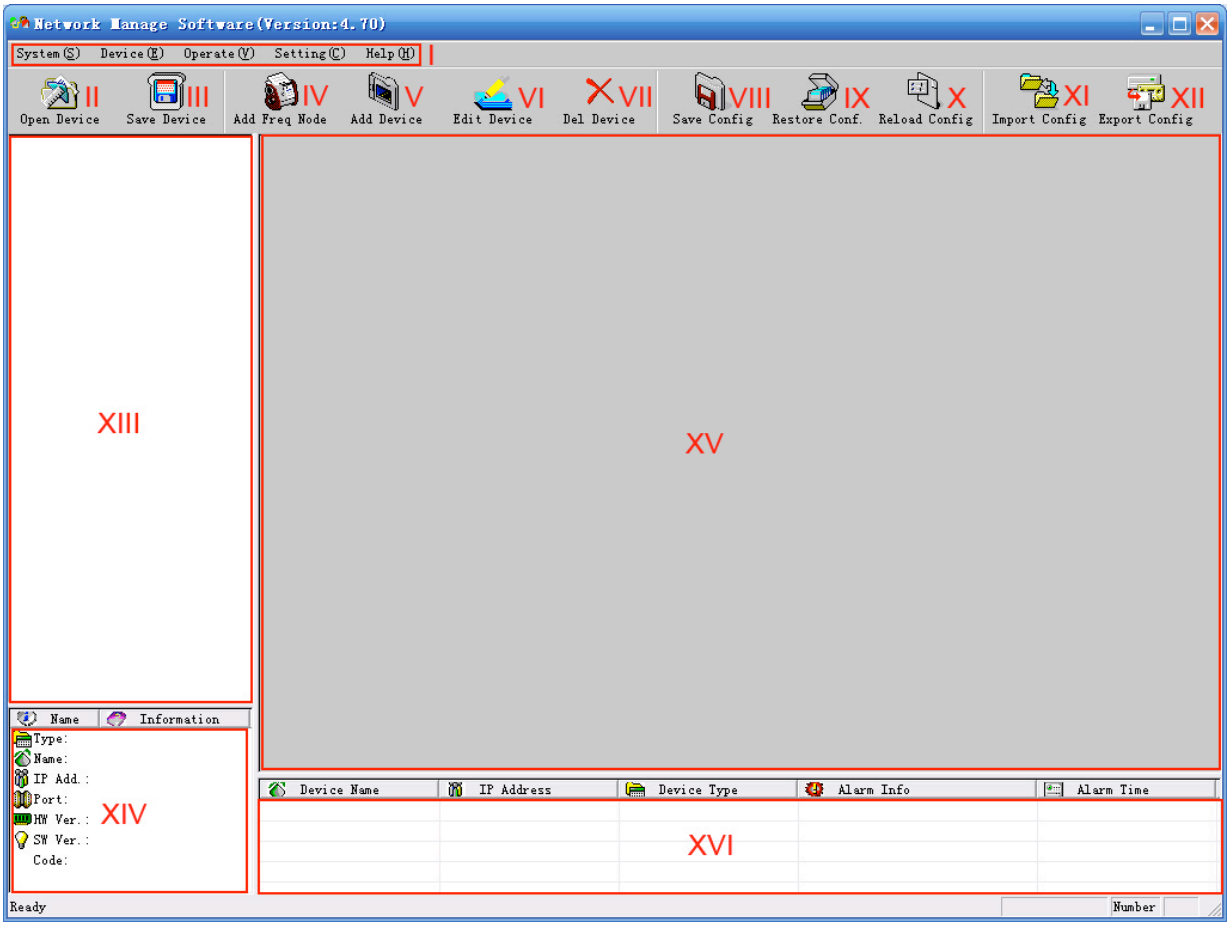
on a PC to set and monitor device. Most of all head-end equipments (satellite receiver, encoder, multiplexer, scrambler, modulator, and adapter, etc.) can be set by NMS which is with UDP protocol and supports windows operation system.

7.1. NMS Login



NMS Login Interface

Default user name and password are “admin”. You can change the user name and password by “Setting”->”User Setting” and then login again. If it’s the first time to use it, without any device info, the menu shows as below:



Current NMS is without any device, user can add per his device.

I: Menu Bar

II: Open Device

III: Save Device

IV: Add Freq Node

V: Add Device

VI: Edit Device

VII: Del Device

VIII: Save Config

IX: Restore Config

X: Reload Config

XI: Import Config

XII: Export Config

XIII: Device List

XIV: Device Connection Info

XV: Device Config Operation

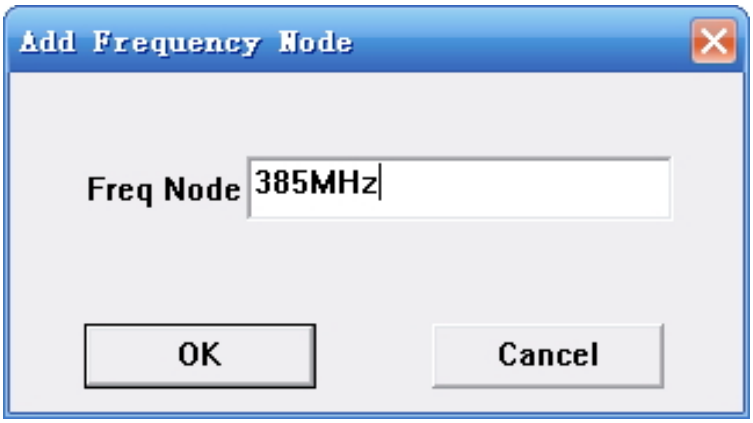
XVI: Alarm List

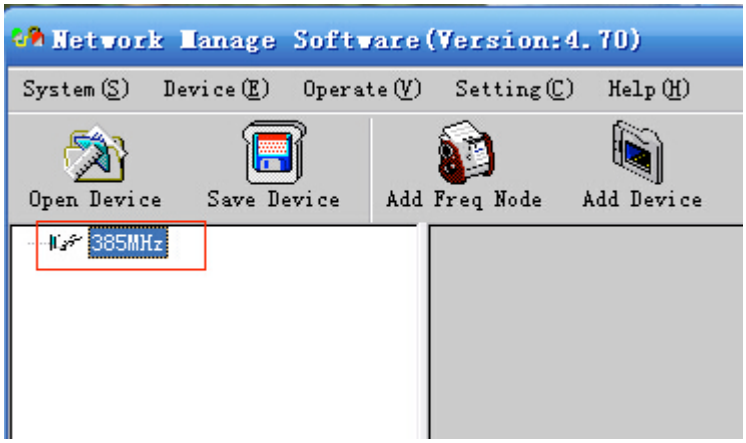
Below chapters will introduce above functions separately.

“Open Device” & “Save Device”: open saved config and save current config. If the config and the NMS are in the same file, they can automatically run when opening or closing the network management software.

7.2. Add Frequency

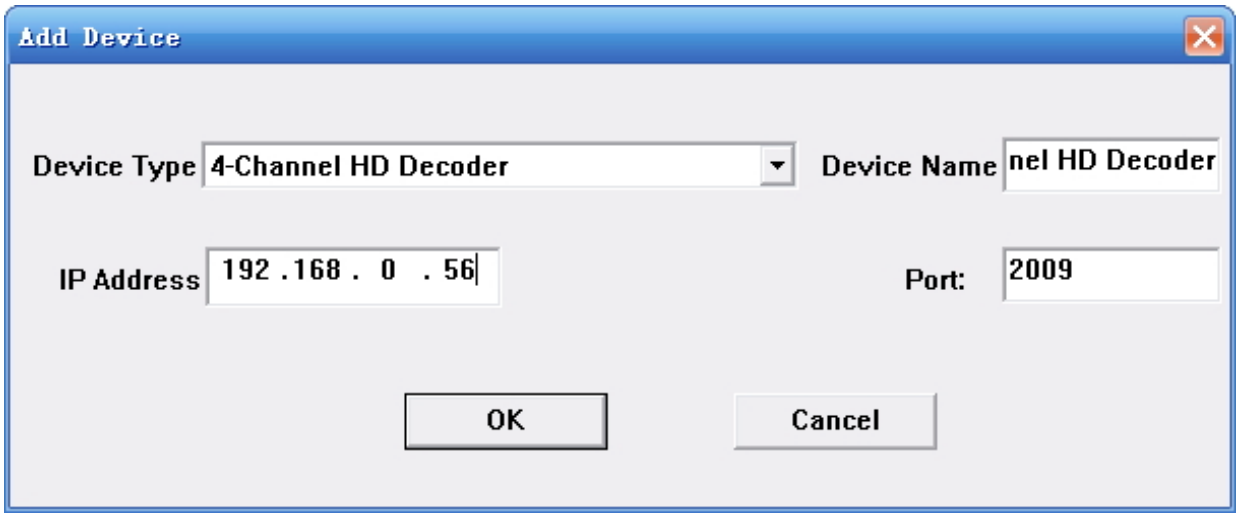
“Add Frequency”: all devices can be divided and managed by frequency. Click “Add Freq Node”, then a dialog for adding frequency shows up. Input a frequency, like 385MHZ”, and then click “OK” to confirm:





7.3. Add Device

Add device under the frequency. Choose frequency and then click “Add Device”, then below dialog shows up:



ADD "4-Channel HD Decoder"

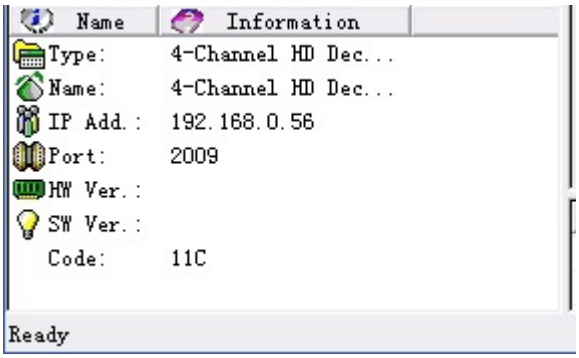
Choose device type" **4-Channel HD Decoder**", set device name (you can name as you like), and set IP address and Port of the device. You can check IP address by clicking down key on the panel or you can enter into "Network Setting" in the menu to check it. Default IP address and Port for **4-Channel HD Decoder** are 192.168.000.056 and 2009.

7.4. Edit Device

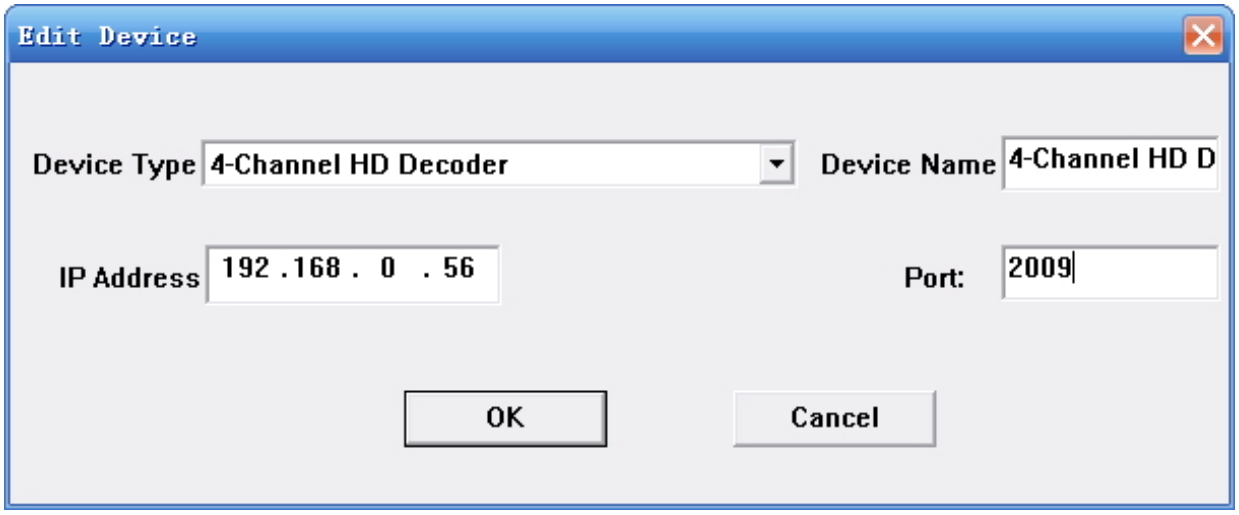
Click the device you need to edit and then you can edit any you like. If the device is not connected, then it shows as below:

Then check by below steps:

1. Check if the connection info is correct:

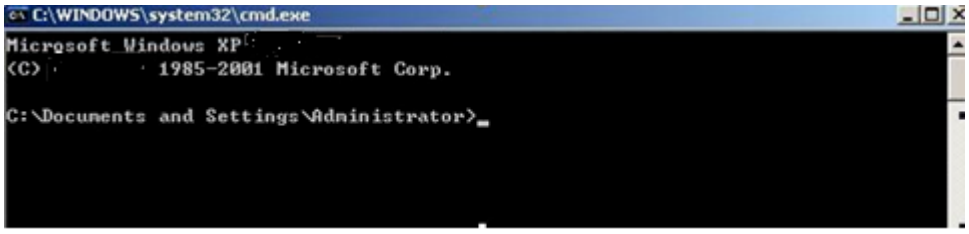


If config is wrong, please choose the device and then click “Edit Device”, then below dialog shows up. Modify it and then click “OK” to save.

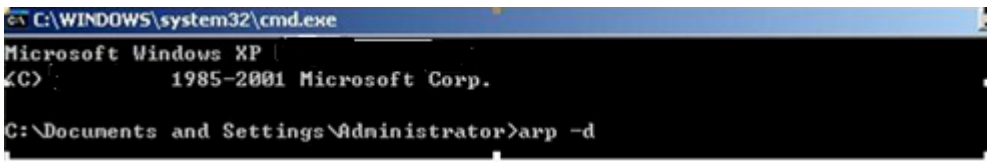


2. Check if there is IP conflict. Turn off the device, and input “cmd.exe” at command column on your PC:

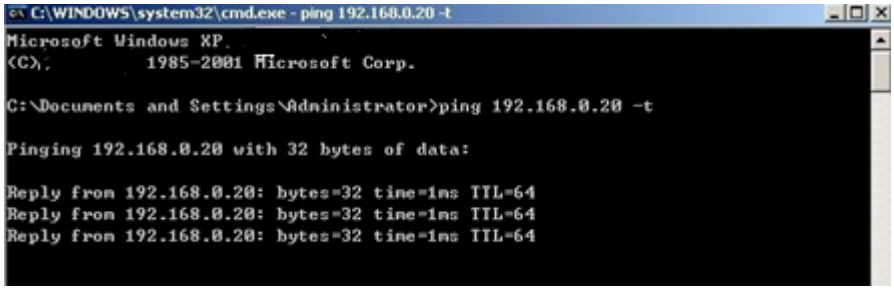
After entering into it:



Input “arp –d” to clear old “arp” information:

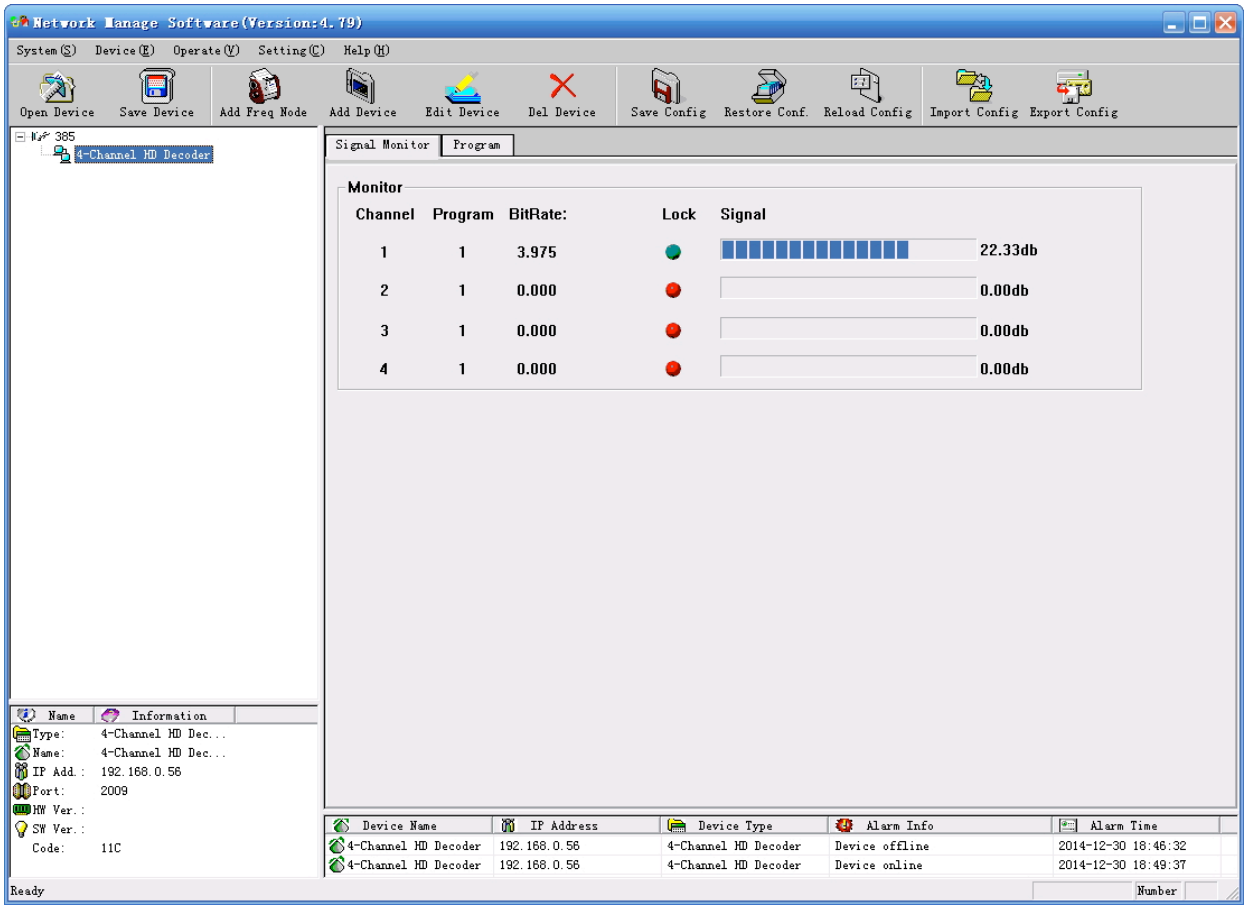


Input “PING”:



Here the ping is 192.168.0.20 (you can put your device IP address when you do it). Here we found 192.168.0.20 passed, which means there is already a device with 192.168.0.20. Then we can find the device out and modify the IP address of the device or your device.

After shooting the problem, the icon turns



At the device list column, click device name to check it. Check the basic info (like firmware and software version) at the device connection column and edit it at the right device operation area.

“Del Device”: delete the device you don’t need from the device list.

7.5. Check and Set Config

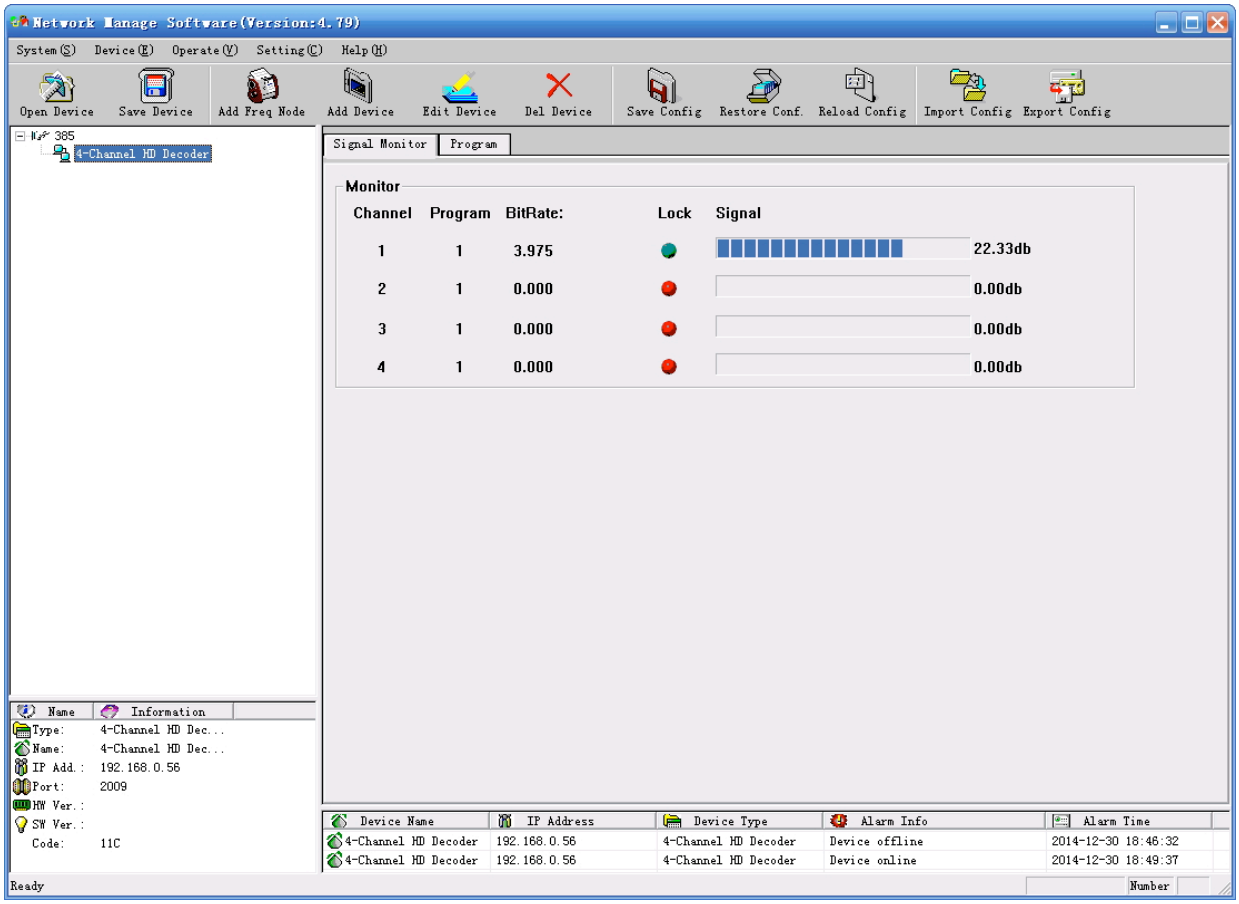
Note: user had better do the following operation before configuring the device:

Click

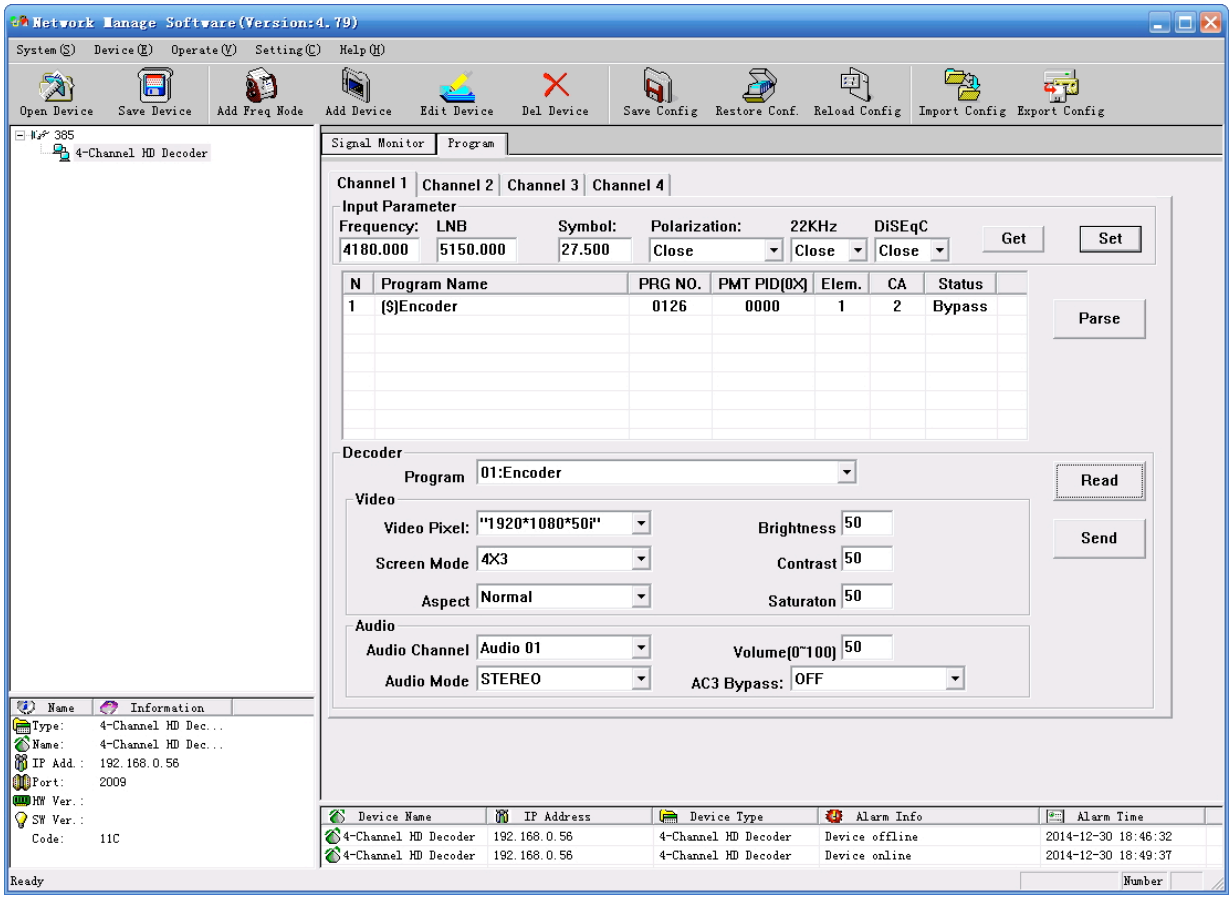
button in NMS software, then click

button to clear the old parameter.

7.5.1. Signal Monitor



7.5.2. Program Setting



“Get”: Read current config from the device.

“Set”: Confirm config and enable it.

7.6. Public Function of NMS

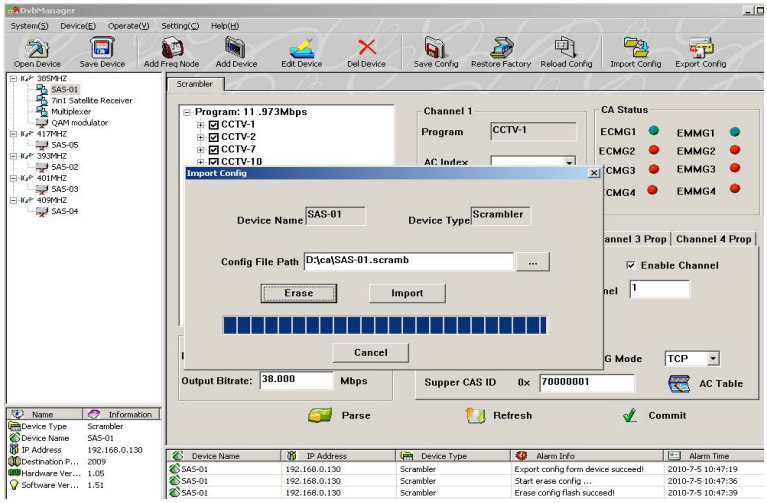
Public function of NMS includes “Save Config”, “Restore Cong.”, “Reload Config”, “Import Config”, and “Export Config”.

“Save Config”: After committing or confirming set configuration, click this button to save all configuration into “FLASH” (storage); you do this by front panel.

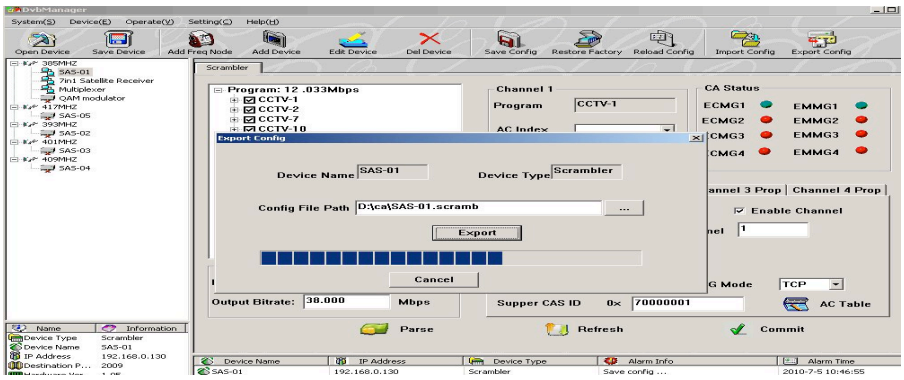
“Restore Config.”: renew and start using the configuration. You can read the renewed configuration by clicking “refresh” or “parse” on operation interface. Please click “Save Config” if it needs to be saved.

“Reload Config”: reload and use the configuration saved in FLASH. This function is usually used after “import config”, and the new configuration is effective without restarting the device.

“Import Config”: import configuration of “export config” into FLASH; the imported config can be used after ‘reload config’ or restart the device.



First please choose the config you want to import, and click “Erase” to clear current config

and then import config from FLASH. At this moment, the config cannot be used. You need restart the device or click “Reload Config” to start new config.

“Export Config”: fetch the device’s configuration to local disk (computer). You can import this configuration when it needs to renew the configuration or to use a back-up device in future.